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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,424	12/20/2001	William Frank Mooney III	PR0017 US CIP	2714 5
23906	7590	06/17/2003		
E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER	HAMILTON, CYNTHIA
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/027,424	MOONEY ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Cynthia Hamilton	1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 December 2001.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 19-21 and 24-28 is/are allowed.
- 6) Claim(s) 1-4,6,9-13,15,18,22 and 29-34 is/are rejected.
- 7) Claim(s) 5,7,8,14,16,17 and 23 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.

- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |                                                                                                              |                                                                             |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. This application is a continuation in part of US Serial No. 09/521536 that was allowed but abandoned by applicants. The examiner notes that independent claims 1 and 32 are the same wording as those allowed in the parent application. Some of the claims have slightly different wording such as claim 2 but appear to mean essentially the same thing. The real differences from the allowed claims in the parent application are in claims 3, 12, 30 and 33 wherein the aliphatic amine compound has a different set of structural limits. The Q is new and the requirement for a tertiary amine has been removed to be replaced by structures that guarantee a tertiary amine being present. Q adds the structure  $\text{CH}_2\text{CH}_2\text{COR}''$  and the definition of p=3 makes the requirement that the amine described must be tertiary. The groups limited by m and n are both monovalent so N always has three carbons bonded to it. Finally, claim 13 was changed to be dependent upon claim 12 instead of claim 11 as in the parent application.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3, 9, 12-13, 18, 30, 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The problem of defining Q in each of these claims is the same. Using claim 3 as an example, the examiner notes that  $\text{CH}_2\text{CH}_2\text{COR}''$  is descriptive of a

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ketone if it is interpreted to be  $\text{CH}_2\text{CH}_2(\text{C}=\text{O})\text{R}''$  which would make C tetravalent as it should be. However, there are no examples given in the application that meet the ketone structure given. If  $\text{CH}_2\text{CH}_2\text{COR}''$  is meant to be  $\text{CH}_2\text{CH}_2\text{C-O-R}''$  and an ether, then the structure has a divalent carbon atom which makes no sense or is missing two groups that should be on the now divalent carbon atom. Thus, the examiner is unsure what is being claimed by applicants with this structure. If it is the ketone or aldehyde (when  $\text{R}''$  is H) structure, an affirmation of such is sufficient. The examiner assumes if this is so the ketones which would fit such a structure are well known in the art just from the structure given. If such compounds are present, the examiner requests that applicants point one out. This is not a demand only a request to strengthen the support for the record.

5. The examiner notes that in claim 13, second line, perhaps "tripropionate" should be "tripropionate" as found in line 4 in "propionate". The under line in this fourth line is part of the claim as presented and should remain as presented. This dual spelling is found in claim 4 as well as the specification . No objection or rejection is made because the examiner believes a worker of ordinary skill in the art could clearly determine what is meant by either spelling. The examiner searched propionate in the Chemical Abstracts Registry file and found one hit. It was also named by the propionate name as well. The search of propionate in the same file got 11511 hits including triethanolamine tripionate. The examiner believes the changing of all propionate cites in the specification and claims to propionate would not be an issue of new matter in this application.

6. Claims 9 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. Claims 9 and 18 recite the limitation "the tertiary amine compound" in claim 3 and 12, respectively. There is insufficient antecedent basis for this limitation in the claim. While tertiary amines are described in claims 3 and 12, they are no longer called tertiary amines out right. This language was changed from the original claim language allowed in the parent application.

7. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 5 of claim 22 is found "aminohydrocinnamic acid (cyanoethane, leuco methine)". The examiner cites Registry No. 2393-17-1 and 1664-54-6 from the REGISTRY file of the STN data base to show that aminohydrocinnamic acid, i.e. H<sub>2</sub>N-phenyl- CH<sub>2</sub>-CH<sub>2</sub>-CO<sub>2</sub>H, is not cyanoethane (Registry number 107-12-0), i.e. H<sub>3</sub>C-CH<sub>2</sub>-C≡N. The leuco methine term was not found in a Google web search. Methine refers to the structure -C= which is not present in aminohydrocinnamic acid. Thus, what is meant by "aminohydrocinnamic acid (cyanoethane, leuco methine)" is unclear because it is not a name of a single compound, neither or other names of the same compound set forth. Are these other choices for the leuco dye of claim 22? It is not clear what is meant here. Thus, the limits of claim 22 are unclear.

8. The examiner notes on page one as she did in the parent application that

- a. "dye forming composition" is defined as "one that contains at least one relatively colorless compound, for example a leuco dye, that can form color as a result of application of energy to the composition.",
- b. "print-out image" is defined as "an instantly accessible, discernible colored pattern resulting in exposure to electromagnetic radiation", and

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- c. “non-dye forming composition” is defined on page 2 as “one that lacks a color forming dye compound”.

These definitions are taken as applicant set limits on these terms.

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-4, 6, 9-11, 15, 29-34 is rejected under 35 U.S.C. 102(b) as being anticipated by Ricoh Co. (94:217579) or Ricoh KK (Derwent-Acc-NO: 1981-10444D) or Taniguchi et al (Pat-no. JP355156938A) as evidence of JP 55-156938. Ricoh Co disclose an image element which anticipates the instant element. It is a paper support, i.e. a cellulose support, coated on one side with a leuco dye, and polyethylene glycol, i.e. a hydrogen donor and cellulose acetate butyrate, a binder, and coated on the other side with a composition comprising triethanolamine triacetate, i.e. a hydrogen donor and tertiary amine. Taniguchi et al discloses the same general element wherein the polyethylene glycol is cited as the hydrogen donor. Ricoh KK lists cellulose acetate butyrate, n-ethyl-p-toluene sulphonamide as hydrogen donors. Ricoh KK, Ricoh Co, and Taniguchi et al are all English abstracts of JP 55-156938 and as such are evidence of what the Japanese document discloses as of the date of December 6, 1980. An English translation of this document is not available at this time. It has been submitted for translation.

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tateoka et al (4,962,013) teach the separation of a triplet state quencher from a photochromic material by putting the quencher in the substrate itself. Washizu et al (4,962,009)

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teach separating the leuco dye from the reducing agent in microcapsules but no mention of putting one part on the opposite side of a substrate is made.

11. Claims 5, 7-8, 14, 16-17, 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

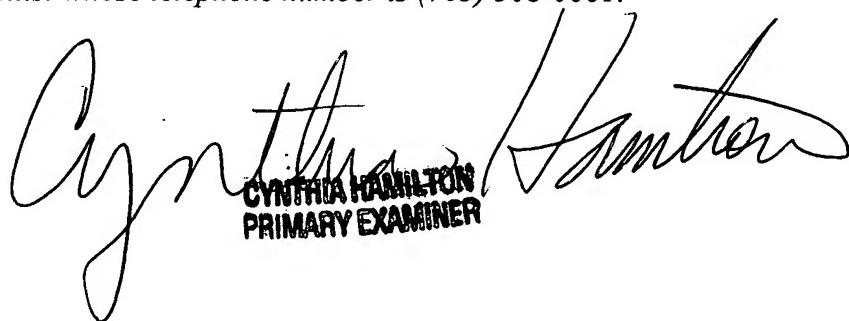
12. Claims 19-21, 24-28 are allowed.

*Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cynthia Hamilton whose telephone number is (703) 308-3626. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.*

*If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on (703) 308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.*

*Any inquiry of a general nature or relating to the status of this application should be directed to the 1700 receptionist whose telephone number is (703) 308-0661.*

Cynthia Hamilton  
June 11, 2003



A large, handwritten signature of "Cynthia Hamilton" is written in cursive ink. Below the signature, the name is printed in a smaller, bold, black font: "CYNTHIA HAMILTON" on top and "PRIMARY EXAMINER" directly underneath it.